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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,960	06/14/2001	Peter Hagerlid	A33846-PCT-	5244

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EXAMINER

SISSON, BRADLEY L

ART UNIT PAPER NUMBER

1655

DATE MAILED: 11/30/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/719,960

Applicant(s)

HAGERLID ET AL.

Examiner

Bradley L. Sisson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-45 is/are pending in the application.
- 4a) Of the above claim(s) 40-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 23-39, in Paper No. 12 is acknowledged. The traversal is on the ground(s) that the inventions are linked to "the same general inventive concept" and that there would not be a serious burden placed upon the Office by searching the various inventions. This is not found persuasive because for as shown in the Office action of 23 August 2001, the two inventions, while drawn to "the same general inventive concept" do not necessarily require the same technical features and as such they lack a special technical feature. Additionally, the searching of inventions of different composition and usage would place an undue burden on the Office.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 40-45 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 12.

Claim Objections

3. Claims 26-39 are objected to for being of improper order. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim that depends from a dependent claim should not be separated by any claim that does not also depend from said dependent claim. It should be kept in mind that a dependent

claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n). In the present case claims 26-39 depend from claim 23 yet are separated from said independent claim by independent claim 25.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 23-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 23 and 25 are confusing as to how a dispenser is to dispense reagents into a sample when there need not be any structural relationship between the sample and the dispenser. Seemingly the dispenser will dispense reagents into the sample receptacle. Claims 24, and 26-39 which depend from said claim 23, fail to overcome this issue and are similarly rejected.

7. Claims 23-39 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: No structural relationship is given or recited for the elements recited in independent claims 23 and 25, *i.e.*, the sample receptacle, the dispenser, the optically sensitive device, the light determination device and the recorder. Dependent claims 24 and 26-39, whilst providing further characterization of some of the above-identified elements, do not necessarily define the structural relationship of the elements or components found therein.

8. Claim 27 is confusing as to how the apparatus is to be arranged "to monitor the reaction sites from underneath." The aspect of being "underneath" some unidentified element renders the claim confusing. It is noted that in the instance of claim 24 the sample receptacle is to be a plate. It is noted that claim 27, like that of claim 24, depends from claim 23 and as such, claim 23 has been interpreted as encompassing the limitations of both claims 24 and 27. Given such an interpretation, it is unclear just how one is to view a reaction through an apparently solid plate.

9. The term "smaller" in claim 29 is a relative term that renders the claim indefinite. The term "smaller" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

10. Claim 37 is confusing as to there being provided "channels in a block." The term "block" is an adjective used to modify an otherwise missing noun. Applicant is requested to clarify just what type of block is contemplated.

Claim Rejections - 35 USC § 103

11. Claims 23-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfof et al., in view of Rushbrooke et al.

12. Pfof et al., disclose at length an apparatus that can be used in combination with any of a variety of sample receptacles, *inter alia* 96-well or microtitre plates. The device comprises a plate for receiving the sample receptacles, dispensing means to delivering the sample and/or reagents to the various wells. Illumination means, optical detection means and data storage and analysis means. The optical sensing means can be used to measure not only liquid level, optical

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density, but also signals generated from a reaction that has taken place in one or more sample receptacles. Fiber optics may be used to deliver one or a plurality of light beams to the various wells.

13. While Pfof et al., does disclose connecting the light sensing means to a computerized receiver and processing means, which in turns speaks to rendering the light signal to a digital form, Pfof et al., does not teach explicitly of using a charged coupled device nor do they teach explicitly of use of the device in a DNA or nucleic acid assay.

14. Rushbrooke et al., teach at length of using a charged couple device (CCD) so to detect, measure, and evaluate light signals resulting for various chemical/biological assays. The aspect of using such technology in combination with sample receptacles such as a 96-well plate are disclosed in column 11. The application of such technology to DNA assays are found in column 12.

15. In view of the explicit guidance found in Rushbrooke et al., one of ordinary skill in the art at the time the invention was made would have been highly motivated to have combined the CCD technology (Rushbrooke et al.) with the device of Pfof et al., as such a combination would have permitted the ordinary artisan to have at their disposal a device that would be capable of not only dispensing samples and reagents and conducting assays, but would also be able to detect any signal with greater sensitivity and evaluate same with greater accuracy. In view of the well-developed state of the art and the explicit guidance provided, the ordinary artisan would have been not only highly motivated but would have also had a most reasonable expectation of success.

16. For the above reasons, and in the absence of convincing evidence to the contrary, claims 23-39 are rejected under 35 USC 103(a).

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (703) 308-3978. The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3592 for regular communications and (703) 308-0294 for After Final communications.

19. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



Bradley L. Sisson
Primary Examiner
Art Unit 1655

bls
November 28, 2001